

CLAIMS

What is claimed is:

1. A locking surgical instrument for gripping a surgical workpiece, the instrument comprising:

a body including a shaft having a first end, a second end, and an axis therebetween,

an engagement tip formed adjacent the second end is receivable by the workpiece, a portion of the engagement tip is divided by one or more slits from the second end toward the first end for a predetermined distance to form a plurality of segments able to be biased radially outwardly to grip the workpiece in force transmitting relationship; and

an actuator engageable with the body such that movement of the actuator biases the segments to grip the workpiece.
2. The instrument of claim 1 wherein the engagement tip engages the workpiece in an axial force transmitting relationship.
3. The instrument of claim 1 wherein the body shaft is axially cannulated from the first end toward the second end such that the cannula extends under the slit portion a predetermined amount and the actuator includes a shaft having a first end, a second end, and an axis therebetween, the shaft being receivable within the cannula for axial translation between an unlocked position in which the actuator second end is spaced from the body shaft second end and a locked position in which the actuator second end is nearer the body shaft second end and biases the segments.

4. The instrument of claim 3 wherein the actuator threadingly engages the body such that turning the actuator causes it to axially translate between the unlocked and locked positions.
5. The instrument of claim 3 wherein the cannula comprises a first diameter spaced from the body shaft second end and a second diameter within the slit portion, the second diameter being smaller than the first diameter such that the actuator is engageable with the second diameter to bias the segments.
6. The instrument of claim 5 wherein the cannula tapers from the first diameter to the second diameter.
7. The instrument of claim 6 wherein the cannula tapers under the slit portion.
8. The instrument of claim 5 wherein the actuator includes a tapered portion near its second end, the actuator tapered portion being engageable with the second diameter of the cannula to bias the segments.
9. The instrument of claim 3 wherein the cannula extends completely through the shaft from the first end to the second end.
10. The instrument of claim 1 wherein the one or more slits each terminate with a circular opening having a radius greater than one-half the width of the slit.
11. The instrument of claim 1 wherein the engagement tip further engages the workpiece in torque transmitting relationship.
12. The instrument of claim 11 wherein the engagement tip is non-circular.
13. The instrument of claim 11 wherein the engagement tip includes flats and vertices, the engagement tip being slit from one flat to another flat such that the vertices are left intact.

14. The instrument of claim 13 wherein the segments are able to be biased by the actuator such that at least one of the vertices is pressed into engagement with the workpiece.
15. The instrument of claim 2 wherein the engagement tip is receivable by a pin of a rotating hinge knee prosthesis to facilitate axial insertion and removal of the pin from the prosthesis.
16. The instrument of claim 15 wherein the engagement tip is receivable by one of a hinge pin and a hinge post extension.
17. A locking surgical instrument for gripping a pin of a knee prosthesis, the instrument comprising:
 - a body including an elongated shaft having a first end, a second end, and an axis therebetween, a polygonal engagement tip formed adjacent the second end being receivable by a similarly shaped opening on the pin, a portion of the engagement tip being slit from the second end toward the first end for a predetermined distance to divide the tip into a plurality of segments able to be biased radially outwardly to grip the workpiece in axial force transmitting relationship, the body shaft being axially cannulated from the first end toward the second end such that the cannula extends into the slit portion a predetermined amount; and
 - an actuator including a shaft having a first end, a second end, and an axis therebetween, the shaft being receivable within the cannula for axial translation between an unlocked position in which the actuator second end is spaced from the body shaft second end and a locked position in which the

actuator second end is nearer the body shaft second end and biases the segments.

18. The instrument of claim 17 wherein the actuator threadingly engages the body such that turning the actuator relative to the body causes it to axially translate between the unlocked and locked position.

19. A method of gripping a surgical workpiece comprising:
providing an instrument having a shaft with an axis and an engagement tip formed at one end, a portion of the engagement tip being slit to divide the tip into a plurality of segments able to be biased radially outwardly, and an actuator engageable with the body such that movement of the actuator biases the segments outwardly;
inserting the engagement end into an opening in the workpiece; and
moving the actuator to bias the segments outwardly to grip the workpiece in force transmitting relationship.